

ECHENEIS NAUCRATES (*Linn. Auct.*), Ship-master Echeneis.

No. 7. Mr. Gilbert's list.

This species is named "munnènullergo" by the natives of Port Essington, who take it occasionally in the harbour. Schneider's account of the fish is in many respects erroneous, the caudal fin being stated to be rounded instead of lunate on the margin, and the numbers of the rays, probably from typographical error, are wrongly noted. The Port Essington specimen agrees in every respect with one from the West Indies, preserved in the Haslar Museum. The rays are as follows:—

Br. 9—9; discal plates (1st dors.?) 24; D. 37; A. 37; C. $16\frac{2}{3}$; P. 21; V. 7.

Artedi and Cuvier mention twenty-two as the usual number of discal plates.

LXIV.—On some new Genera of the Class Myriapoda.

By G. NEWPORT, Esq.*

THE family *Geophilidæ* of Leach, composed of those little, gliding, wormlike Myriapodes so abundant in our gardens, and yet so imperfectly known to the scientific naturalist, includes at least two distinct genera, one of which only has hitherto been characterised. Dr. Leach himself, to whom we are indebted for the foundation of nearly all the scientific knowledge we possess of these animals, appears to have regarded one of the five native species with which he was acquainted as distinct from the others, and placed it accordingly in a division of his genus *Geophilus*, founding his divisions on the comparative length of the joints of the antennæ. These divisions, with the same distinguishing characters, have been retained by M. Gervais, who in 1837 published a monograph on the whole class, and added a third section to the genus *Geophilus*, composed of two species, one of which, *Geophilus ferrugineus*, had been described by Koch; and the other, *Geophilus maxillaris*, was then first described by M. Gervais as a new species. It is this division, added by M. Gervais, the *Geophili maxillares*, which I now propose to establish as a separate genus, under the name of *Mecistocephalus*, the characters of which, derived from the peculiarly elongated form of the head, are as distinctly marked as in any genus of this order.

In a collection of *Myriapoda*, from the magnificent cabinet of the Rev. F. W. Hope, which that gentleman many months ago, in the most handsome manner, placed entirely at my control for the purpose of describing, I discovered a third species, brought to this country by the late Rev. Lansdowne Guilding, from the island of St. Vincent, which I immediately recognized as a new genus; and on examining the unarranged specimens of *Myriapoda* in the collections of the British Museum, which the head of the zoological depart-

* From the Proceedings of the Zoological Society for Dec. 13, 1842.

ment, J. E. Gray, Esq., has kindly permitted me to describe and arrange, I have since found two other species, both new to science, one of which was brought from India by — Elliot, Esq., but the locality of the other is unknown. The genus I am now about to propose will thus include five species, agreeing most accurately in their generic characters. They are all of them foreign to this country. The only native species which at all approaches to *Mecistocephalus* is the *Geophilus longicornis* of Leach, supposed by M. Gervais to be *Scolopendra electrica* of Linnæus, which constitutes Leach's second section of *Geophilus*. This I propose to separate as a distinct sub-genus, by the name of *Necrophilæophagus*, although its characters are not so distinctly marked as in the preceding. The name proposed for it is derived from its being mostly found under rotten wood, or under the rotten bark of trees.

Before I proceed to characterize these genera, it may be well to remark, that the construction of the head in these, as compared with the other *Geophili* and the *Scolopendræ*, seems to throw much light on the number of parts which are included in this division of the body in the higher *Articulata*, and on the manner in which these parts are united; and although I do not intend on the present occasion to enter on the consideration of these structures, which I propose to do hereafter, it is necessary to state that I regard the head of the *Chilopoda* as formed of two compound moveable portions, the anterior of which, bearing the antennæ, I shall designate the *frontal segment*; and the posterior, which gives attachment to the large forcipated foot-jaws, which I regard as the analogues of the mandibles of insects, I shall call the *basilar segment*. Posterior to these there is a third part, which, although perfectly distinct in all the *Geophilidæ*, is united to the basilar in the *Scolopendræ* and higher genera of this order, forming a kind of cephalo-thorax or cephalo-prothorax. This I shall consider the second or *sub-basilar segment*.

It is on characters derived from these parts that I now propose to establish the genera.

Class MYRIAPODA.

Order I. CHILOPODA.

Family GEOPHILIDÆ, Leach.

Section A. *Geophili maxillares*, Gervais.

Genus *Mecistocephalus**, Newport.

Characters.—*Frontal segment* very narrow, elongated, four-sided, more than twice as long as broad, antennæ inserted on the frontal margin, subapproximated, three times as long as the frontal segment; joints obconic, rather elongated, slightly hairy; *basilar segment* quadrate, very short, and much narrower than the frontal, almost atrophied on the dorsal surface; *labium* and inferior surface of the basilar segment very large, quadrate, extending backwards beneath the sub-basilar segment, with its anterior margin slightly excavated; *mandibles* enlarged, straightened, and projecting, but curved and pointed

* From *μήκιστος*, *longest*, and *κεφαλή*, *head*.

at their apex, with the internal margin acute and denticulated, and the basilar joint encroaching on the dorsal surface of the basilar segment. *Sub-basilar* segment large, transverse, with the anterior margin straight, and the posterior and angles rounded. Body gradually tapering; legs from forty-five to seventy pairs; posterior pair styliform.

Species 1. *Mecistocephalus ferrugineus*, Koch.

2. *Mecistocephalus maxillaris*, Gervais.

3. *Mecistocephalus punctifrons*, Newport.

Frontal segment and mandibles deeply punctured, with the basilar segment and labium dark chestnut; body testaceous, mandibles each with two large acute teeth; legs forty-nine pairs.

Length two inches three-tenths. India: — Elliot, Esq.

In the collection at the British Museum.

Frontal segment polished, with small scattered punctures; mandibles very strong, polished, and deeply punctured on the superior surface, with the internal margin acute, with two large sharp teeth; labium flattened, polished, with a longitudinal depression, and a few minute, scattered punctures; body gradually tapering, but broad and strong anteriorly; legs forty-nine pairs, broad, strong.

I am uncertain whether this specimen had arrived at its full growth, the number of legs being less than in the other species. It may nevertheless have acquired its proper number since the species described by M. Gervais has but forty-six pairs, and I have ascertained most satisfactorily that the whole of the *Chilopoda* acquire very nearly their full complement of legs before they have attained to one half of their adult size.

4. *Mecistocephalus Guildingii*, Newport.

Frontal segment polished, with a few scattered punctures; sides and posterior angles rounded, ferruginous; mandibles quadridentated; basilar segment and labium polished, ferruginous, with a broad, longitudinal sulcus and deep punctures on the latter; body yellowish, testaceous; legs forty-nine pairs. Length one inch and a half.

Island of St. Vincent. Rev. Lansdowne Guilding.

In the cabinet of the Rev. F. W. Hope.

There are five specimens of this species, varying considerably in size, but agreeing most accurately in the number of their legs.

5. *Mecistocephalus punctilabium*, Newport.

Head, mandibles, labium and sub-basilar segment ferruginous; mandibles tridentated; body brownish-green, with the two posterior segments antennæ and legs ochraceous. Frontal segment and labium flattened, the latter deeply, and thickly punctured. Legs sixty-one pairs.

Length two inches. Country?

In the collection of the British Museum.

The frontal segment of this species is flattened and punctured, with the posterior margin straight, and the anterior somewhat rounded; the mandibles are smooth, polished, rather straightened, and rounded, with the internal margin less acute, with two or three very small teeth; labium flattened, polished, with large, numerous

and deeply impressed punctures, and a longitudinal median sulcus, with a slight emargination; dorsal surface of the body with three longitudinal sulci; anal styles five-jointed; second and third joint short, but the fourth and fifth longer.

The characters of this species are less strongly marked than in others of this genus, and they seem to form a transition to those of the next genus. The anal styles are still very distinctly organs of locomotion, in which respect they resemble those of *Scolopendra* and *Cryptops*.

Subgenus *Necrophlæophagus**, Newport.

*Geophilus*** , Leach.

Geophili longicornes, Gervais.

Characters.—*Frontal segment* quadrate, a little longer than broad, with the angles obtuse; antennæ inserted on the front, sub-approximated, more than three times as long as the frontal segment, with the joints twice as long as broad, conic; *basilar segment* short, with the posterior margin much wider than the frontal; *mandibles* short, strong, with the internal margin rounded, toothless; *labium* broad, almost quadrate, with the border emarginated; *body* somewhat tapering; legs more than fifty pairs; preanal segment narrow, styles short.

Species *Necrophlæophagus longicornis*, Leach.

Yellow, with the segments of the head, mandibles and labium dark ferruginous; antennæ hairy, four times as long as the frontal segment, with the three or four terminal joints smaller than the others; labium smooth, with minute punctures, subconic; anteriorly wide and almost straight, posteriorly rounded; legs yellow, fifty-five pairs, anal styles small, slightly hairy.

Length two and a half to three inches. Europe: very common.

I have retained Dr. Leach's original name to this species, which has been supposed by M. Gervais to be the *Scolopendra electrica* of Linnæus. But Linnæus's species is described as "*pedibus utrinque 70*;" while Leach's species, of which there are four specimens in the cabinet at the British Museum, besides ten collected by other persons, has at most only fifty-five.

Genus *Gonibregmatus*†, Newport.

Characters.—*Frontal segment* short, transverse, anteriorly pointed; *basilar segment* very short, wider than the frontal; *antennæ* moniliform, approximated at their base, joints very short, with the terminal one slightly elongated; eyes absent; *mandibles* very slender, long, pointed, arcuate, toothless, compressed and twisted near their base; *labium* very short, transverse, with the anterior border slightly produced and emarginated; *labium internum* projecting, thick, folded, and formed for sucking; palpi with the terminal joints slender and acute; *sub-basilar segment* short, but larger than the basilar; body elongated, segments more than 160; legs inserted into little foveolæ in

* From νεκρός, *dead*; φλοιός, *bark*; and φάγω, *to eat*.

† From γωνία, *angle*, and βρέγμα, *the fore part of the head*.

the lateral ventral plates; the two or three posterior segments of the body enlarged and tuberoso; anal styles small, not used in walking.

1. *Gonibregmatus Cumingii*, Newport.

Greyish ash-colour; frontal segment very convex, rounded posteriorly; mandibles blackish; labium smooth; all the segments of the body very short, convex; dorsal surface with numerous irregular longitudinal sulci; antepenultimate segment with the dorsal and ventral plates atrophied; anal styles slender, with their basilar internal margin carinated; anal scale convex, subcordate, posteriorly rounded with two thin marginal plates; legs 161 pairs, naked, claws black. Length $4\frac{3}{4}$ to 5 inches.

From the Philippine Islands. Mr. Cuming.

In the collection at the British Museum.

I have never seen the *Geophilus Walckenaeri* of Gervais, but from the description given of that species I strongly suspect that it ought to be included in this genus.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

May 4, 1842.—Read “A Postscript to the Memoir on the occurrence of the Bristol Bone-Bed in the neighbourhood of Tewkesbury,” by Hugh Edwin Strickland, Esq., F.G.S.

Since the reading of the former communication (vol. x. p. 147), Mr. Strickland has ascertained that the bone-bed occurs at least ten miles further north, or at Defford Common, in Worcestershire, making a total range of 104 miles. At this locality are some old salt-works belonging to the Earl of Coventry, and the shaft, which was sunk about seventy years ago to the depth of 175 feet, was emptied a few months since of the brine with which it is wont to overflow. At the bottom of the shaft, which descends through the lias into the grey marl of the triassic series, but without reaching the red marl, is a tunnel that follows the dip of the strata for about 160 yards. The shaft, Mr. Strickland says, consequently intersects the horizon of “the bone-bed,” and among the rubbish thrown out, he found considerable quantities of the peculiar white sandstone with bivalves (*Posidonomya*), shown in his former paper to represent in Worcestershire the bone-bed of Aust and Axmouth; but he also found specimens of the sandstone charged with the same description of teeth, scales and coprolites so abundant at Coomb Hill and the localities just mentioned.

The occurrence of an abundance of pure salt water within the area of lias, Mr. Strickland says, is an interesting phenomenon, and for a solution of it, he refers to Mr. Murchison's Account of the Geology of Cheltenham, p. 30.

June 29.—“On the minute Structure of the Tusks of extinct Mastodontoid Animals.” By Alexander Nasmyth, Esq., F.G.S.

The author, at the commencement of his memoir, acknowledges his obligations to Dr. Grant for having first called his attention to the